

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-028043**Date Inspected:** 23-Jul-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** As noted below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

12E-E2.1-C1 (Exterior)

This QA Inspector randomly observed ABF/JV qualified welder Chau Tran #3139 perform the Shielded Metal Arc Welding process in the 2G horizontal position of the B-U2a Complete Joint Penetration (CJP) splice on 12E-E2. 1-C1 on the exterior of the OBG. QC Inspector Salvador Sandoval verified prior to the start of welding that the pre-heat temperature was in compliance with ABF-WPS-D1.5-1040C-CU. This QA Inspector observed the welder utilizing E7018-H4R electrodes at amperage of 131 and witnessed the cleaning of the joint between passes as QC measured the inter-pass temperatures. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that there were no issues at this location and appeared to be in general conformance with the contract specifications.

13E PP122.2 (Interior)

This QA Inspector randomly observed ABF welder Wai Kit Lai#2953 performing excavation operations of an ultrasonic rejectable indication on the location and dimensions listed below on the interior of the OBG located at 12E PP122.2. Upon completion of the excavations QC Inspector Salvador Merino performed a Magnetic Particle (MT) Inspection of the site to determine the soundness of the metal. This QA Inspector noted that QC found no

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rejectable indications.

13E PP122.2 y+3010mm: 110mm in length, 20mm wide and 8mm deep.

This QA Inspector observed ABF welder Wai Kit Lai performing repair welding operations on the repair site listed above utilizing the SMAW process in the 4G overhead position. The welder employed 3.2mm E7018-H4R electrodes with an amperage of 129. QC Inspector Salvador Merino monitored the welding and the parameters to ensure compliance as they pertain to ABF-WPS-D1.5-1004-Repair. Upon completion of the welding, ProHeat 35 thermal heating blankets were placed over the joint for a period of 1 hour at a temperature range of 450°F to 650°F.

The work at this location was completed on this date and appeared to be in general conformance with the contract documents.

12E-E2.1 (Interior)

This QA Inspector randomly observed the ongoing Carbon Arc Cutting (CAC) process of the backing bar and the back-gouging from the root side of the joint at 12E-E2.1 on the interior of the OBG. ABF/JV qualified welder Wen Han Yu #6317 was observed continuing the process throughout the shift employing scaffolding to access the locations for cutting and gouging. This QA Inspector observed the welder utilizing the appropriate respiratory apparatus and noted that the work at this location was in progress and appeared to be in general conformance with the contract specifications.

13E K Plate (Interior)

This QA observed, at random intervals, ABF/JV qualified welder Richard Garcia #5892 performing SMAW with 3.2mm diameter E9018-MH4-R electrode and implementing ABF-WPS-D15-1072. The joint being welded was 13E-EK-SK3. During welding QC Inspector Salvador Merino was noted monitoring the welding parameters. The work at this location is ongoing as this QA Inspector made subsequent observations to monitor quality and noted that the work at this location appears to be in general conformance with the contract documents.

12E PP111.1-LS3 (Interior)

This QA Inspector conduction fit up operations and planar alignment measurements on the Longitudinal Stiffeners at 12E PP111.1 on the interior of the OBG. This QA Inspector observed that the Root Opening varied from 9mm to in excess of 15mm. This QA Inspector generated an Incident Report on this date and notified METS QA Lead Inspector Danny Reyes and METS QA Task Leader Bill Levell via email for review and disposition of the report due to the non-compliance with AWS D1.5-2002 - Section 3.3 - Assembly 3.3.4.2 Root openings larger than those allowed in 3.3.4.1 may be corrected by welding only with the approval of the Engineer. See attached photos for further details.

This QA Inspector made random observations of SMAW in the 3G vertical position on the Longitudinal Stiffener located at 12E PP111.1-LS3 on the interior of the OBG. ABF/JV qualified welder Mike Jimenez #3671 was observed employing E9018-H4R electrodes drawing 131 amperes. QC Inspector Salvador Merino was present monitoring the welding and the parameters as they applied to ABF-WPS-D1.5-1012-3. In a conversation with QC, it was stated that pre-heat temperatures were verified and the electrodes were obtained from a baking oven. This

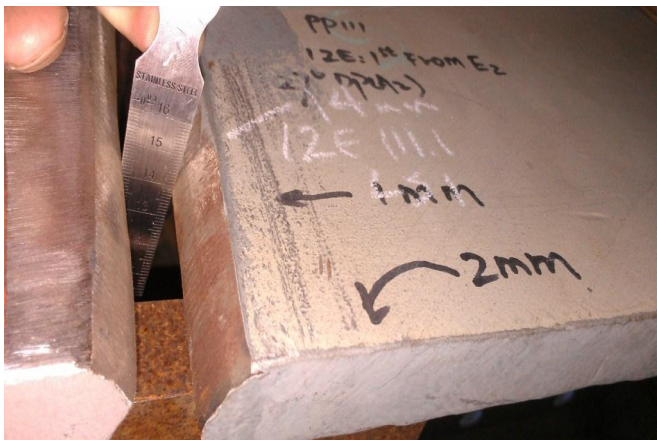
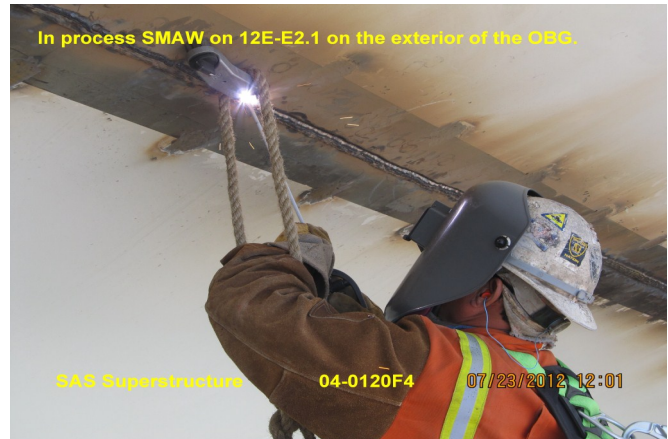
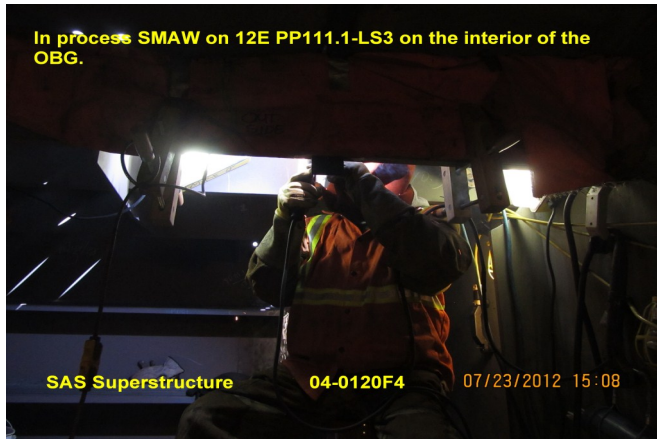
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QA Inspector noted that the heat induction blankets were in use and covered the length of the weld surface. On a subsequent observation, the welder was noted as cleaning the work between passes utilizing a small disc grinder, brushes and compressed air. This QA Inspector observed the work for quality throughout the shift and noted that the work is in progress and appeared to be in general conformance with the contract documents.

Summary of Conversations:

Discussed welder assignments and locations with Quality Control Inspector Slavador Merino.



Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910 , who represents the Office of Structural Materials for your project.

Inspected By:	Frey,Doug	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
